

age - 0107

# Lesson 1-7

## Adding and Subtracting Decimals

<b>Lesson Objective</b> To add and subtract decimals and to solve problems involving decimals	<b>NAEP 2005 Strand:</b> Number Properties and Operations <b>Topic:</b> Number Operations <b>Local Standards:</b> _____
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### Example

① **Finding Decimal Sums** Find  $6.8 + 4.65 + 2.125$ .

**Step 1** Estimate  $6.8 + 4.65 + 2.125 \approx \square + \square + \square$ , or  $\square$

**Step 2** Add.

6	.	8	0	0	
4	.	6	5	0	
+	2	.	1	2	5
<hr/>					

← Line up the decimal points.  
 ← Write zeros so that all decimals have the same number of digits to the right of the decimal point.

### Check for Reasonableness

The sum  $\square$  is reasonable since it is close to  $\square$ .

### Quick Check

Find  $0.84 + 2.0 + 3.32$ . Estimate first.

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## Examples

- ② **Using Front-End Estimation** A lemonade costs \$1.79, sodas cost \$1.29, and water costs \$1.49. Use front-end estimation to estimate the total cost of buying one of each drink.

**Step 1** Add the front-end digits. These are the the dollar amounts.

$$\begin{array}{r} \$1.79 \\ 1.29 \\ + 1.49 \\ \hline \$ \end{array}$$

**Step 2** Estimate the total cents. Then adjust dollar amounts.

$$\begin{array}{r} \$1.79 \\ 1.29 \\ + 1.49 \\ \hline \$3 \end{array} \quad \begin{array}{l} \leftarrow \text{about } \$ \\ \leftarrow \text{about } \$ \\ \leftarrow \text{about } \$ \end{array}$$

The total cost is about \$  + \$ , or \$ .

- ③ **Finding a Difference** First estimate and then find  $16 - 8.79$ .

**Estimate**  $16 - 8.79 \approx \square - \square$ , or

Write 16 with a decimal point and two zeros.

$$\begin{array}{r} 16.00 \\ - 8.79 \\ \hline \end{array}$$

Rename 16 as 15 and  tenths.

$$\begin{array}{r} 15 \cancel{10} \\ 15 \cancel{10} \\ - 8.79 \\ \hline \end{array}$$

Rename 10 tenths as 9 tenths and 10 .

$$\begin{array}{r} 15 \cancel{10} \cancel{10} \\ 15 \cancel{10} \cancel{10} \\ - 8.79 \\ \hline \end{array} \quad \leftarrow \text{Subtract.}$$

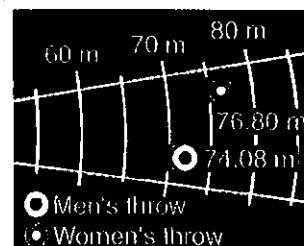
**Check for Reasonableness** The difference  is reasonable since it is close to .

## Quick Check

2. Use front-end estimation to estimate the total cost of one small popcorn and two large popcorns.



3. Use the graph at the right. How much greater is the women's record discus throw than the men's throw?



Lesson 1-7 Adding and Subtracting Decimals.

Directions: FIRST ESTIMATE, then find each sum or difference.

1)  $0.6 + 3.4$  Estimate = \_\_\_\_\_

2)  $7 + 11.436 + 3.08$  Estimate = \_\_\_\_\_

3)  $8.91 - 6.08$  Estimate = \_\_\_\_\_

4)  $60 - 2.037$  Estimate = \_\_\_\_\_

## Homework Exercises

**Assignment:** Lesson 1-7 Pages 34-35 # 14, 17, 30 and 36    **Date** \_\_\_\_\_

[illegible]